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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,712	06/04/2001	Tsutomu Hoshino	2382-19	9070

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EXAMINER

DAHBOUR, FADI H

ART UNIT PAPER NUMBER

3743

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/871,712

Applicant(s)

HOSHINO ET AL.

Examiner

Fadi H. Dahbour

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-23 is/are allowed.
- 6) ☒ Claim(s) 1,8,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 2-7,9,11 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because of the appearance of the word "means" in line 10. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, 10, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Darrow et al ('610).

Darrow discloses a magnetic resonance imaging system for interventional MRI involving an operation to insert a device into an object (Figs.1-6), comprising detection means for detecting a position of a tip of the device (see "position...of an invasive device, such as a catheter...has a transient coil attached near its end...that can be detected" in lines 1-6 of abstract), and movement state display means for displaying a movement state of the tip of the device on the basis of data indicative of the position of the tip detected by the detection means (Figs.1 & 6, also see "signals are...sent to a tracking computer for analysis...to solve for the position and orientation of the transmitting coil. This positional information is then superimposed on multiple...images to give the operator real-time information on the three-dimensional location of the invasive device within the subject" in lines 1-8 of col.2, also see "wherein the imaging means comprises a Magnetic Resonance imaging system" in lines 19-20 of col.10),

wherein the movement state display means is composed of means for displaying the data indicative of the position of the tip detected by the detection means (Figs.1 & 6, also see "signals are... sent to a tracking computer for analysis... to solve for the position and orientation of the transmitting coil. This positional information is then superimposed on multiple... images to give the operator real-time information on the three-dimensional location of the invasive device within the subject" in lines 1-8 of col.2, also see "wherein the imaging means comprises a Magnetic Resonance imaging system" in lines 19-20 of col.10), together with information indicative of a sequence of time in detecting the data (see "real-time" in line 7 of col.2), wherein the movement state display means for displaying the data of the position of the tip detected by the detection means on a reference image in a superimposition manner (Figs.1 & 6, also see "signals are... sent to a tracking computer for analysis... to solve for the position and orientation of the transmitting coil. This positional information is then superimposed on multiple... images to give the operator real-time information on the three-dimensional location of the invasive device within the subject" in lines 1-8 of col.2, also see "wherein the imaging means comprises a Magnetic Resonance imaging system" in lines 19-20 of col.10), wherein the device is a catheter (see "catheter" in line 2 of abstract).

Allowable Subject Matter

4. Claims 2-7, 9, 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 14-23 are allowed.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dumoulin et al ('635), Dumoulin et al ('678), Dumoulin et al ('165), Dumoulin et al ('987), Darrow et al ('680), Darrow et al ('129) and Darrow et al ('739) are cited to show magnetic resonance imaging systems and methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fadi H. Dahbour whose telephone number is 703-306-5479. The examiner can normally be reached on M-F, 9am-5:30pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry A. Bennett, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



Fadi H. Dahbour
Examiner
Art Unit 3743